

Lesson 5: Damaging Enemies

Objective: Use custom Logic to create and track enemy Health Points. Reduce enemies' Health Points when colliding with the Slash Area.

Time: 20 Minutes

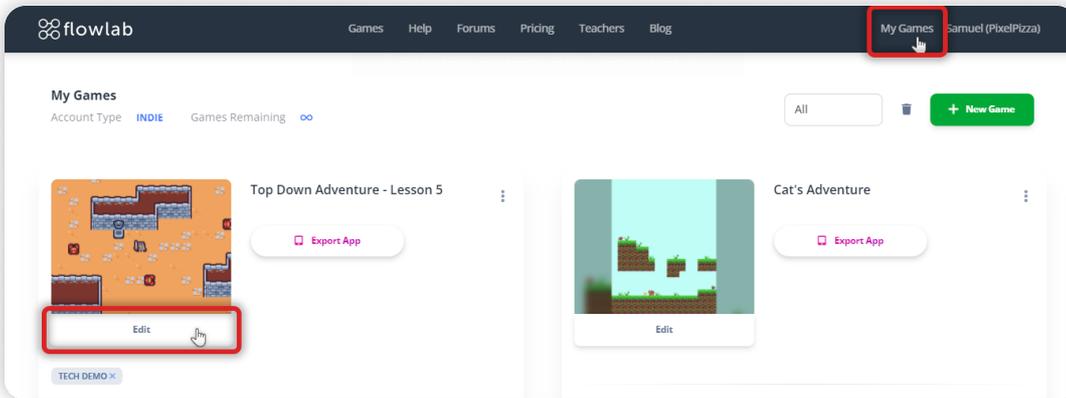
Level: 2.5 - Beginner/Intermediate

Description: Using the "Slash Area" object we created in the previous lesson, we'll make it damage the Enemies and reduce their Health. Once an enemy's health reaches 0, the enemy is defeated and disappears.

Step 1

Edit your Game

Log in and start at your "My Games" page <https://flowlab.io/game/list>. Then, click "Edit" next to your game to open the game editor.



Step 2

Create Health Logic for the Enemy

Click on the Enemy Object and select "edit" from the circle menu. Click on "Behaviors" to open the Behavior Editor.

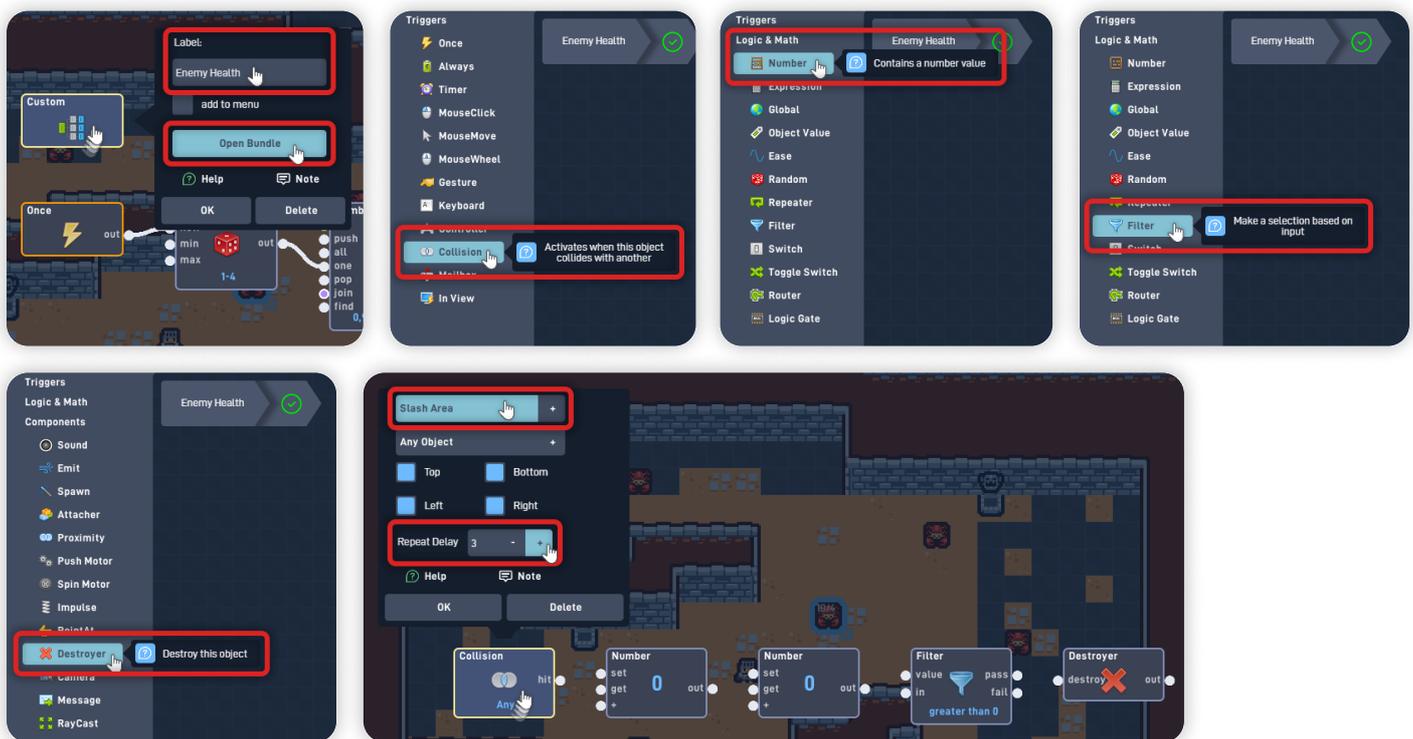
From the Behavior Bundles section, click "New Bundle" to add a new Bundle.



Move the newly added bundle and place it above the already existing logic.
Click on the Bundle to open its Behavior panel, **set its Label to “Enemy Health”**, and click “Open Bundle” to open and edit its contents.

From the Triggers section, **add a Collision** behavior.
From the Logic & Math section, **add Two Number** behaviors.
From the Logic & Math section, **add a Filter** behavior.
From the Components section, **add a Destroyer** behavior.
Organize the newly added behaviors as shown below.

Click on the Collision behavior to open its behavior panel, change it from “Any Type” to **“Slash Area”**, and **set its Repeat Delay to “3”**.
Click “OK” to close the Collision behavior panel and save your changes.



Open the first Number behavior panel, set its Label to “Damage” and its Current Value to “-1”.
Click “OK” to close the Number behavior panel.

Open the second Number behavior panel, set its Label to “Total Health” and its Current Value to “3”.
This number defines the number of times the Player must attack to defeat the Enemy
Example: If you set the Total Health to 1, the Enemy is defeated after the first attack.
Click “OK” to close the Number behavior panel.



Open the Filter behavior panel, set its formula to “Less than”, and set its value to “1”.

Now, let’s connect these behaviors.

Connect the Collision “hit” output to the “get” input from the Damage Number.

Connect the Damage Number “out” to the “+” input from the Total Health Number.

Connect the Total Health Number “out” to the “in” input from the Filter.

Connect the Filter “pass” output to the “destroy” input from the Destroyer.



This logic activates every time the “Enemy” object collides with the “Slash Area” object, triggering the “Damage” Number and reducing the “Total Health” Value by 1.

The Total Health Value is input through the filter, and if its Value is “less than 1”, the enemy destroys itself.

Move the behaviors in order to better view the game below, and click the “Play” button in the bottom-left corner to Playtest the game inside the Editor.

You can see the logic triggering when attacking the Enemy you selected on the Level Editor.

Click on the “Stop” button to stop playtesting. Click “OK” to close the Behavior Editor, and click “OK” again to close the Enemy Object properties panel.



Step 2

Make the Slash Area Invisible

Click on the “Library” on the bottom toolbar to open the Object Library, select the “Slash Area” object, and click “Behaviors” to open its Behavior Editor.



From the Logic & Math section, **add a Number** behavior.

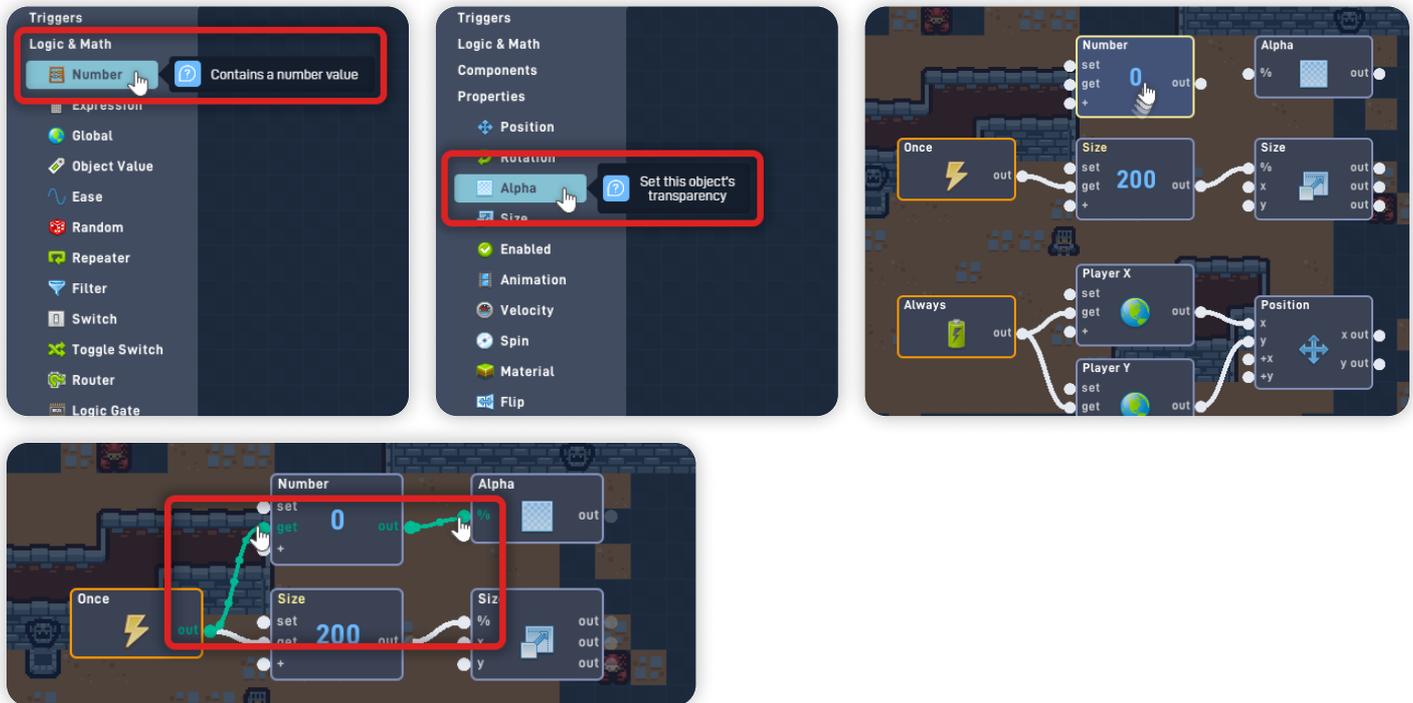
From the Properties section, **add an Alpha** behavior.

Move and place the newly added behaviors above the existing logic, as shown below.

Now, let's connect the behaviors.

Connect the Once "out" to the "get" input from the Number behavior.

Connect the Number "out" to the "%" input from the Alpha behavior.



This new logic makes the Slash Area object invisible (transparent) once the game starts. Even though invisible, it can still collide with and damage the Enemy object.

Click "OK" to close Behavior Editor, and click on the "Library" icon to close the Library and the Object Properties panel.

Step 4

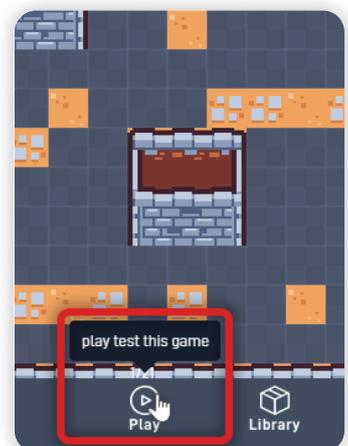
Playtest your Game

Now, click the "Play" button in the bottom toolbar to play your game.

When in play mode:

- By pressing "Space", the Player object attacks.
- If the Player attacks when near an Enemy object, it damages the Enemy and reduces its "Total Health" by 1.
- After 3 attacks on the same Enemy, the Enemy is defeated and disappears.

If you have problems, check the troubleshooting section.



Troubleshooting

A big part of game development is figuring out why things sometimes do not behave as expected. If your game is misbehaving, check the following points:

- **If the Enemy's Health Value isn't reducing**, ensure the Damage Number is connected to the "+" input from the Total Health Number, on the Enemy object behaviors; *(Step 2)*
- **If the Enemy isn't deleting itself** after its Total Health reaches 0, ensure the Filter formula is set to "Less than 1", on the Enemy object behaviors; *(Step 2)*
- **If the Enemy isn't detecting collisions**, ensure that the "Slash Area" object has "enabled collisions" on the Object Physics panel;

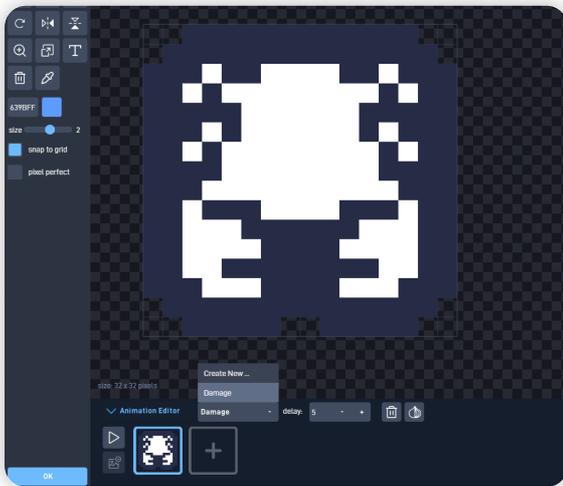
Optional Game Enhancements

Once you have this Lesson's content working, here is a simple enhancement to try:

- **Add a Damage Animation to the Enemy** by creating a "Flash" one-frame Animation on the Sprite Editor.
We created a "Flash Frame" by filling the Enemy shape with White and applying a brighter Outline.

After you create the Animation, add an Animation behavior to the "Enemy Health" bundle and **connect the Animation "start" input to the Damage Number "out"**.

This simple Animation creates a nice Feedback effect for the Player, communicating that the Enemy was hit and has lost Health.



Top Down Adventure - Part 1

Nice work!

You've now finished **Lesson 5 out of 6.**

